First Named Inventor: SWALES, Andrew G. – Title: AUTOMATIC DETERMINATION OF CORRECT IP ADDRESS FOR NETWORK-CONNECTED DEVICES – Atty. Dkt #LAN01-US - S/N 09/614,489 – Customer # 24222

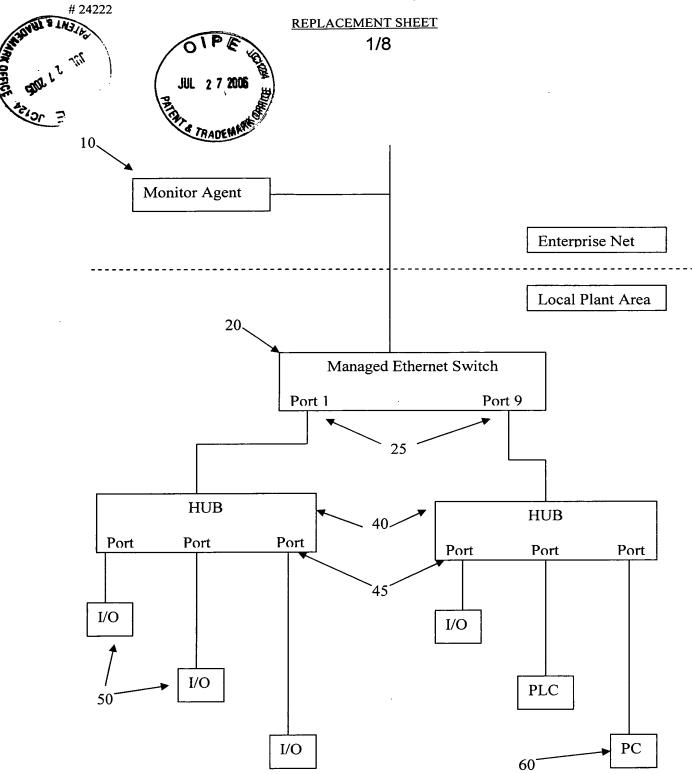
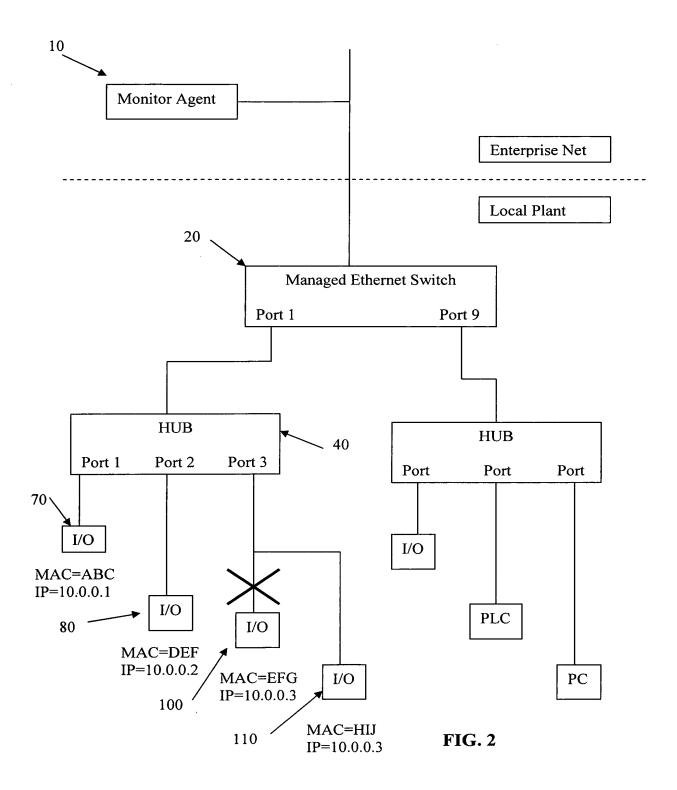
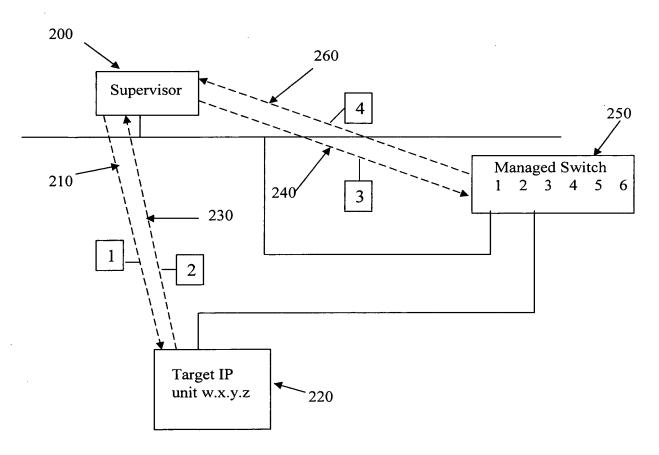


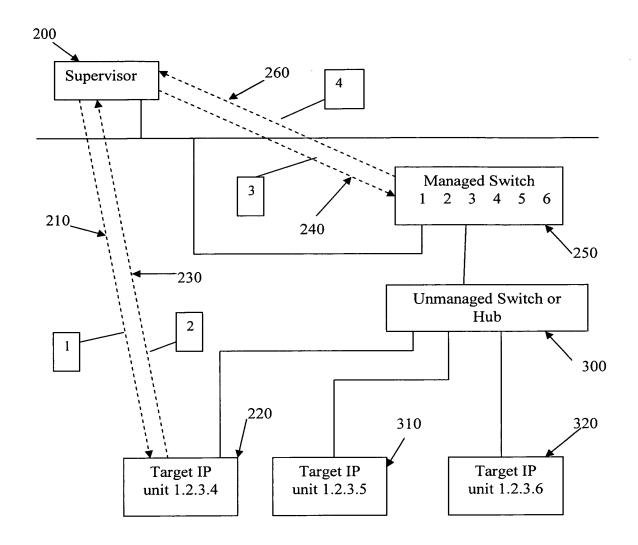
FIG. 1



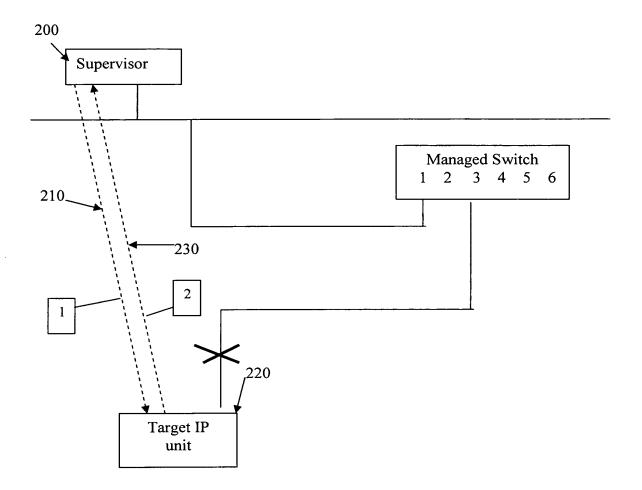


- 1. ARP Request inquire MAC address of IP address w.x.y.z (broadcast)
- 2. ARP response MAC address of requested IP address is xxx
- 3. SNMP Findport request request port number of MAC xxx
- 4. SNMP Findport response port number of MAC xxx was 3

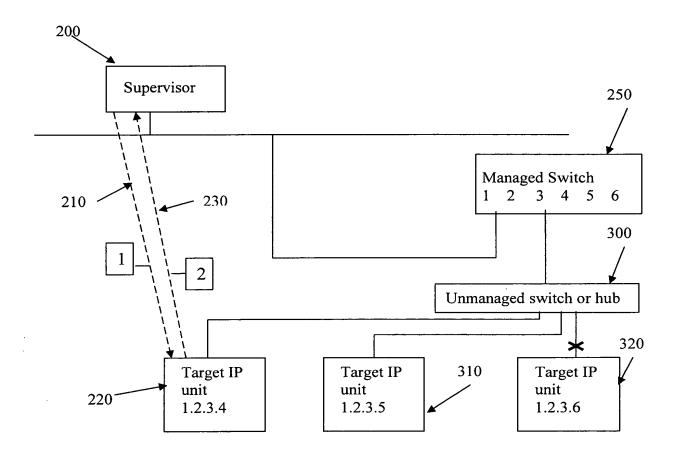
FIG. 3



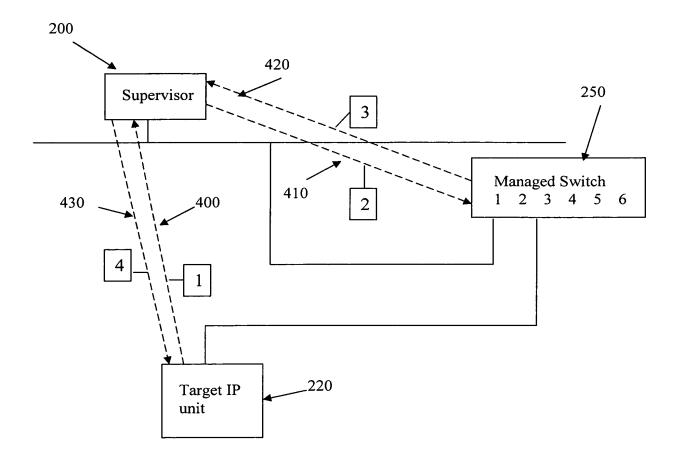
- 1. ARP Request inquire MAC address of selected IP address 1.2.3.4 (broadcast)
- 2. ARP response MAC address of requested IP address is xxx
- 3. SNMP Findport request request port number of MAC xxx
- 4. SNMP Findport response port number of MAC xxx was 3 Targets are automatically determined to be sharing port 3 of the switch.



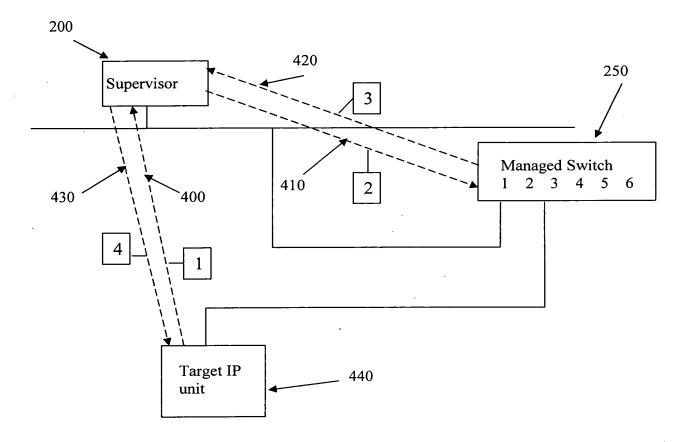
- 1. ARP Request inquire MAC address of selected IP address (unicast)
- 2. ARP response MAC address of requested IP address is xxx If no response is received, signify that the target IP unit is 'down'



- 1. ARP Request inquire MAC address of selected IP address 1.2.3.6 (unicast)
- 2. ARP response MAC address of requested IP address is xxx If no response is received, signify that the target IP unit is 'down' If 1.2.3.6 is the ONLY unit on port 3 of the switch which is down, then it is a candidate for automatic reallocation. If any of the other units found on this port are also down, automatic reallocation will be suppressed.



- 1. BOOTP request please supply IP address for MAC xxx (broadcast)
- 2. SNMP Findport request request port number of MAC xxx
- 3. SNMP Findport response port number of MAC xxx was 3 (MAC xxx already associated with IP at that canonical location OK to assign)
- 4. BOOTP response IP address for MAC xxx is w.x.y.z



- 1. BOOTP request please supply IP address for MAC xxx (broadcast)
- 2. SNMP Findport request request port number of MAC xxx
- 3. SNMP Findport response port number of MAC xxx was 3 (MAC xxx not known. However a **single** unit at that location is not currently responding. Update BOOTP equivalence table to record new IP assignment and authorize assignment)
- 4. BOOTP response IP address for MAC xxx is w.x.y.z